

Chapter IV

LAND USE

INTRODUCTION

Information regarding historic and existing land use and land use development patterns is essential to any sound comprehensive planning effort. This chapter presents the findings of the land use inventories and analyses conducted in support of the preparation of the Waukesha County development plan. Specifically, this chapter describes historic urban growth within the County; describes the existing land use base and changes in that base over the past three decades; and presents more detailed analyses of certain major land use categories, including residential, commercial, industrial, governmental and institutional, agricultural, and extractive land use, within the County.

HISTORIC URBAN GROWTH

Overview

The historic development of Waukesha County, as identified under the Regional Planning Commission's urban growth analysis, is shown on Map 31.¹ Early settlements were established in this County following completion of the U. S. Public Land Survey in 1836. In 1850, urban development was largely confined to settlements within the now incorporated places of Big Bend, Eagle, Hartland, Menomonee Falls, Merton, Mukwonago, Oconomowoc, Pewaukee, and Waukesha. The City of Waukesha was the largest urban center in 1900. The first half of the 20th century saw additional development around many of these original settlements; the development of settlements in Butler, Dousman, and Wales; and residential and recreational development around many of the County's lakes. Suburban development in the easternmost portion of the County was just starting to materialize by 1950.

The pace of urban development within the County accelerated after 1950 and has remained rapid since. The 40-year period from 1950 to 1990 saw significant development in the eastern tier of communities in the County, essentially as an expansion of the Milwaukee metropolitan area, and continued development in and around the City of Waukesha and other established outlying urban centers. In addition, this period saw a proliferation of scattered

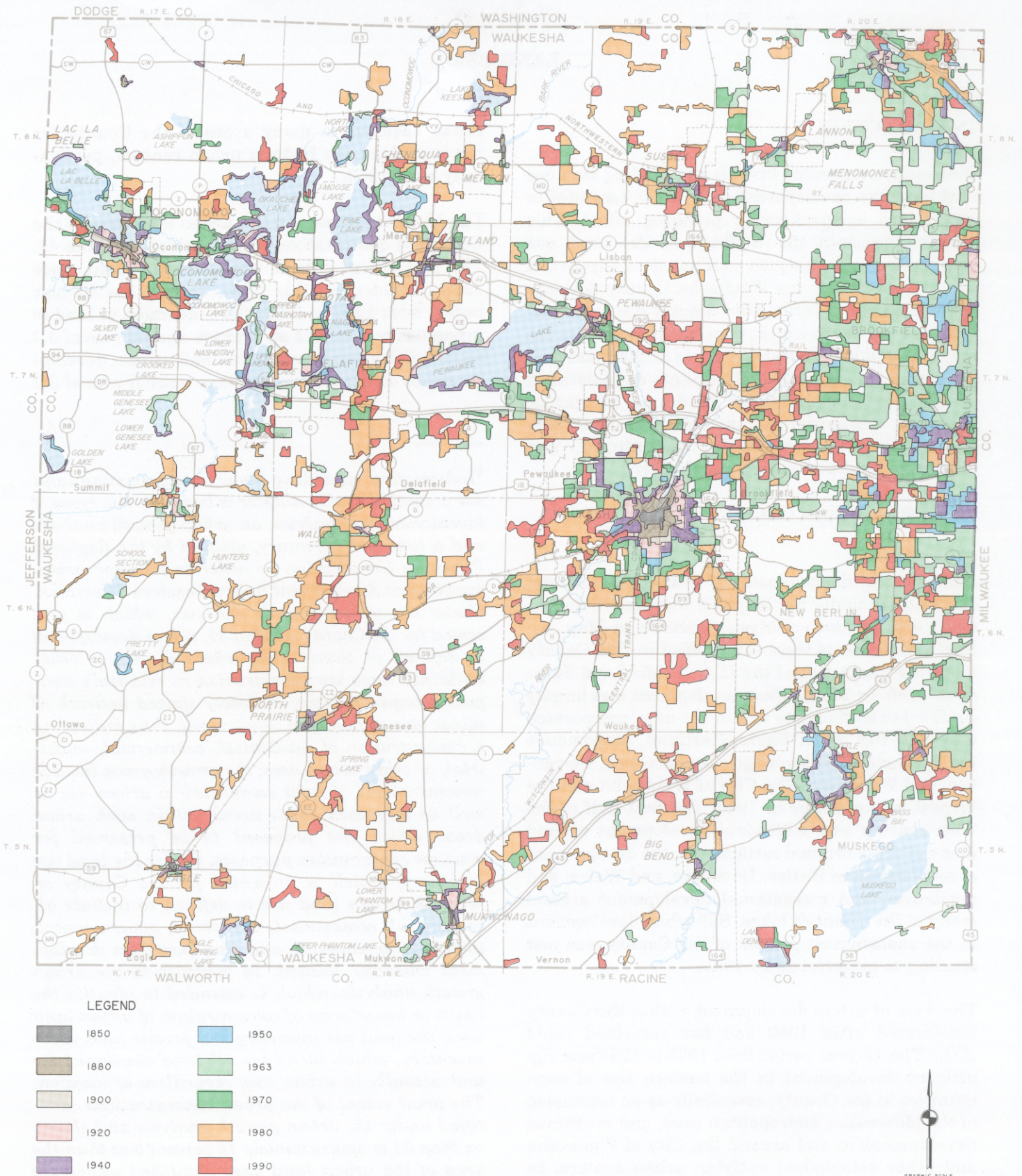
urban enclaves in many areas of the County far removed from the historic urban centers, particularly after 1963.

The historic increase in the urban land area of the County is quantitatively summarized in Table 41. The accelerated rate of urban development since 1950 is evident in this table. During the 50-year period from 1900 to 1950, the conversion of land to urban use occurred at an average annual rate of 0.3 square miles per year. Since 1950, urban development has occurred at an average annual rate of 3.2

¹Information regarding historic and existing land use presented in this chapter is based on two types of inventories and analyses, an urban growth analysis and a land use inventory, utilized by the Regional Planning Commission in order to monitor urban growth and development in Southeastern Wisconsin. Under the urban growth analysis, which is presented for the County on Map 31, urban development is defined as those areas where houses or other buildings have been constructed in relatively compact groups or where a closely spaced network of minor streets has been constructed, thus indicating a concentration of residential, commercial, industrial, or other urban uses; the growth areas include concentrations of land committed to urban use as well as any open space areas within such urban areas which are proposed to be preserved for resource conservation purposes. Under the land use inventory, which is presented for the County on Map 32, urban land use is defined to include all residential, commercial, industrial, governmental, intensive recreational, and transportation development wherever located. In contrast to the urban growth analysis, which is intended to identify the limits or boundaries of concentration of urban land uses, the land use inventory is a precise land cover inventory, which identifies all land developed for and actually in urban use, regardless of location. The areal extent of the urban concentrations identified under the urban growth analysis and shown on Map 31 is approximately 16 percent less than the area of the urban land uses identified under the land use inventory and shown on Map 32.

Map 31

HISTORIC URBAN GROWTH IN WAUKESHA COUNTY: 1850-1990



Source: SEWRPC.

Table 41

**HISTORIC URBAN GROWTH IN
WAUKESHA COUNTY: 1900-1990**

Year	Urban Area ^a			
	Square Miles	Change from Previous Year		Average Annual Change from Previous Year (square miles)
		Square Miles	Percent	
1900	2.44	--	--	--
1920	4.87	2.43	99.6	0.12
1940	13.21	8.34	171.3	0.42
1950	18.39	5.18	39.2	0.52
1963	54.25	35.86	195.0	2.76
1970	72.34	18.09	33.3	2.58
1980	120.05	47.71	66.0	4.77
1990	144.43	24.38	20.3	2.44

^aBased upon urban growth analysis.

Source: SEWRPC.

square miles per year. This reflects growth in urban lands of about 36 square miles, or a rate of 2.8 square miles per year between 1950 and 1963; 18 square miles, or 2.6 square miles per year between 1963 and 1970; 48 square miles, or 4.8 square miles per year between 1970 and 1980; and 24 square miles, or 2.4 square miles per year between 1980 and 1990. By 1990, the developed area of the County encompassed 144 square miles, or 25 percent of its total area.

Urban Sprawl Development

Map 31 indicates a diffusion of urban development enclaves, away from existing urban centers in the County, a pattern commonly referred to as "urban sprawl," particularly after 1963. Urban sprawl is typified by low-density residential development, reliant upon onsite sewage disposal systems and private wells, located in scattered fashion within otherwise rural areas.

In order to analyze the extent of urban sprawl in the County, Map 32 represents urban lands created since 1963, differentiating those lands which lie within planned urban service areas from those which do not. Of the 90-square-mile increase in urban lands in the County between 1963 and 1990, 47 square miles, or 52 percent, were located within planned urban service areas. The balance, encompassing 43 square miles, or 48 percent of the incremental urban land, was located outside planned urban service areas and may be generally characterized as urban sprawl.

Factors contributing to urban sprawl in Waukesha County include the widespread availability of electric power, the continued availability of relatively low-cost fuel for personal automobile transportation, the continued development of the highway system enabling convenient access to formerly rural areas, the decentralization of employment opportunities away from historic employment centers to outlying areas, evolving technologies with respect to onsite sewage disposal systems coupled with government regulatory practices which support the use of such systems, and lower initial land costs attendant to unsewered development. Underlying the proliferation of urban sprawl is a strong affinity on the part of many households for low-density residential development and a continued premium placed upon open space in the vicinity of individual residences.

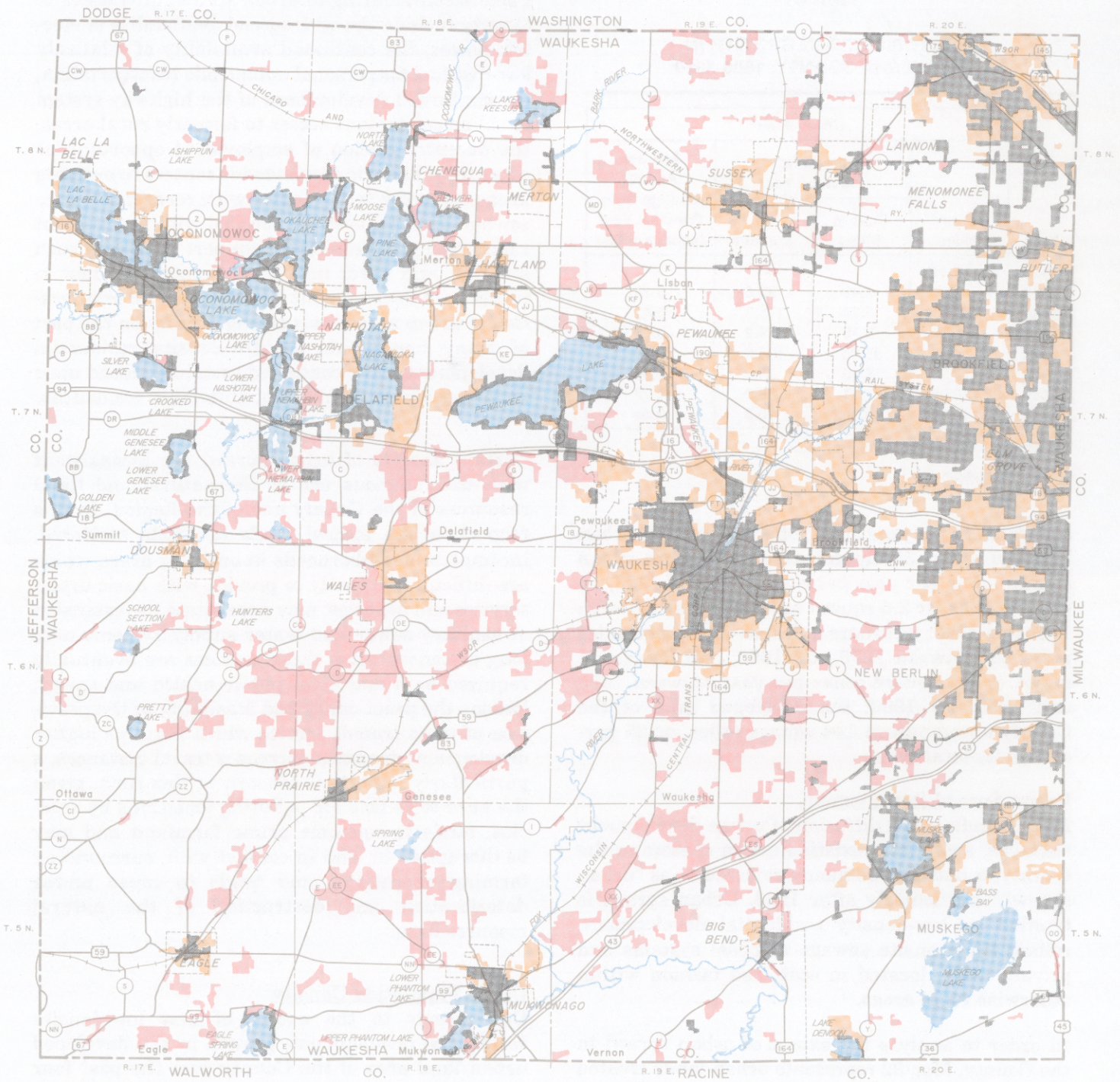
Certain aspects of urban sprawl are inconsistent with the judicious use of the natural and fiscal resources of the County and of the Region. In this respect, urban sprawl tends to create scattered, incomplete neighborhoods in outlying areas which are difficult and costly to provide with basic urban services and facilities; may necessitate the extension of sanitary sewer and water supply systems over long distances when those services are eventually required as a matter of public health and safety; lessens the practicality and feasibility of the provision of mass transit service which requires higher development densities; increases travel distances, a particularly important concern at this time, given the need to reduce air-polluting emissions by vehicles; tends to consume prime farmland and may be disruptive to, and in conflict with, surrounding farming operations; and tends to cause undue deterioration and destruction of the natural resource base.

Urban Population Density

Due largely to the extent of new low-density residential development, growth in the developed urban land area of the County over the past four decades was proportionately greater than growth in resident urban population. Between 1950 and 1990, the developed urban area within the County increased by about 685 percent while the urban population of the County increased by about 320 percent. As a result, the urban population density of the County has decreased over the past four decades, from about 3,900 persons per square mile in 1950 to about 2,100 persons per square mile in 1990 (see Figure 32).

Map 32

URBAN GROWTH IN RELATION TO PLANNED URBAN SERVICE AREAS IN WAUKESHA COUNTY: 1963-1990



LEGEND

- EXISTING URBAN LAND: 1963
- URBAN LAND DEVELOPED BETWEEN 1963 AND 1990:
- INSIDE PLANNED URBAN SERVICE AREA
- OUTSIDE PLANNED URBAN SERVICE AREA
- SURFACE WATER

Source: SEWRPC.

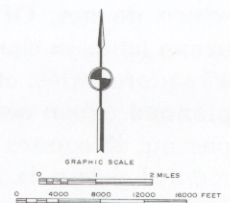
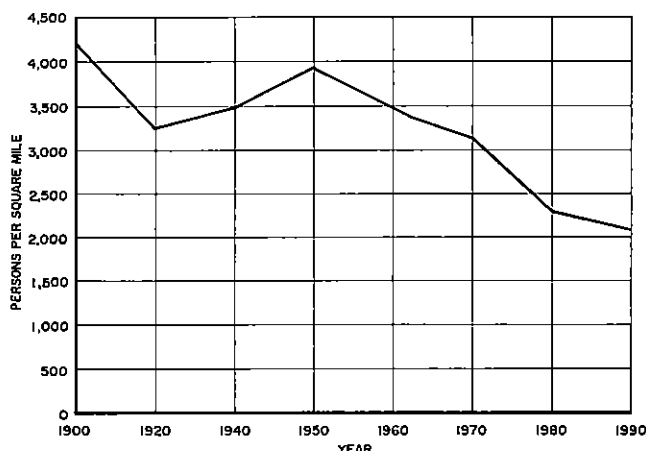


Figure 32

**URBAN POPULATION DENSITY
IN WAUKESHA COUNTY: 1900-1990**



Source: U. S. Bureau of the Census and SEWRPC.

EXISTING LAND USE

While the foregoing section of this chapter provides an overview of development trends in the County since 1900, this section and subsequent sections provide a more detailed description and analysis of the existing land use base of the County and of changes in that base over the past approximately three decades. The information presented in this section is, to a large extent, based upon land use inventories conducted periodically by the Regional Planning Commission. The Commission conducts detailed inventories of existing land use in the Southeastern Wisconsin Region to determine the type, amount, and spatial location of the major categories of land use at selected points in time. The first such inventory was conducted in 1963; the most recent inventory was conducted in 1990. The trend in the various categories of land use for selected years from 1963 to 1990 for the County, based upon the Commission land use inventories, is presented in Table 42. Information regarding existing 1990 land use for cities, villages, and towns in the County is presented in Table 43. The pattern of land use that existed within the County in 1990 is shown on Map 33.

Urban Land Uses

As indicated in Table 42, urban land uses, consisting of residential, commercial, industrial, recreational, governmental and institutional, and transportation, communication, and utility uses,

encompassed about 102,400 acres, equivalent to 160 square miles, or about 28 percent of the County, in 1990. Residential land comprised the largest urban land use category in the County in 1990, encompassing about 61,200 acres, or about 60 percent of all urban land and 17 percent of the total area of the County. Commercial and industrial lands each encompassed about 3,800 acres, about 4 percent of all urban land use and about 1 percent of the total County area. Land used for governmental and institutional purposes encompassed about 4,200 acres, or about 4 percent of all urban uses and about 1 percent of the total area of the County. Lands devoted to intensive recreational uses encompassed about 6,500 acres, some 6 percent of all urban uses and about 2 percent of the County. Lands devoted to transportation, communication, and utility uses, including areas used for streets and highways, railways, airports, and utility and communication facilities, totaled about 22,900 acres, or about 22 percent of all urban uses and about 6 percent of the total County area.

Between 1963 and 1990, urban land uses in the County increased from about 54,700 acres to about 102,400 acres, an increase of about 47,700 acres or about 87 percent. Each of the major urban land use categories increased significantly during this time (see Figure 33). The residential land area approximately doubled, the commercial land area approximately tripled, and the industrial land area quadrupled. The transportation, governmental-institutional, and recreational land use categories also increased significantly, by 42 percent, 65 percent, and 86 percent, respectively.

Existing urban land use for cities, villages, and towns in the County is summarized in Figures 34 and 35. Figure 34 presents the total amount of land devoted to urban use in each civil division in 1990. Figure 35 presents the relative composition of urban land uses by major category for each civil division.

Nonurban Land Uses

Nonurban lands, consisting of agricultural lands, wetlands, woodlands, and surface water, quarries, landfill sites, and other open lands, comprised about 269,200 acres, the equivalent of 421 square miles, or about 72 percent of the total area of the County, in 1990. Agricultural land comprised the largest nonurban land use category, encompassing about 142,400 acres, or about 53 percent of all nonurban land and 38 percent of the total area of the County. Wetlands, woodlands, and surface water, in combination, encompassed about 98,400 acres, repre-